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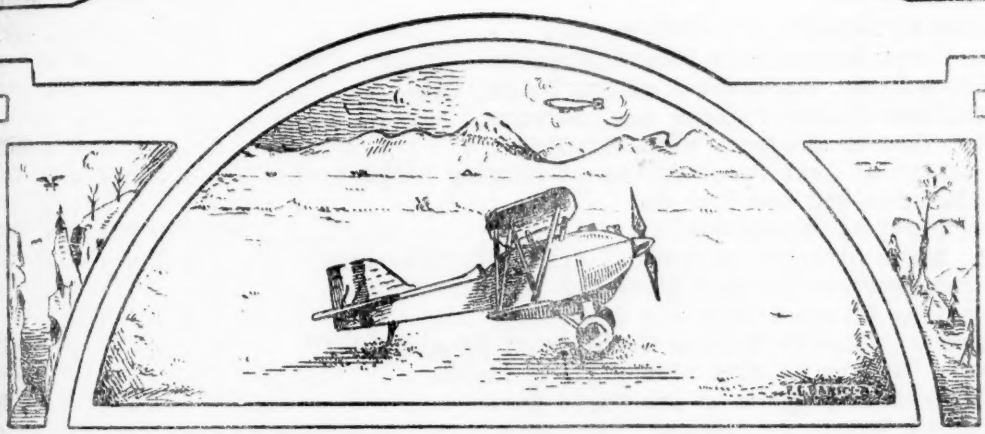

Air Corps News Letter

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VOL. XII A I R C O R P S N E W S No. 12
Information Division, Air Corps — August 29, 1928 — Munitions Building, Washington, D. C.

The chief purpose of this publication is to distribute information on aeronautics to the flying personnel in the Regular Army, Reserve Corps, National Guard, and others connected with aviation.

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RATES OF DESCENT OF A FALLING MAN

By A.M. Jacobs

A most interesting series of tests was recently performed by the Equipment Branch of the Materiel Division, Wright Field, Dayton, Ohio, in which it was attempted to obtain certain and definite information upon the rate of acceleration and limiting velocity of a man falling after he has left an airplane, trusting the course of his future to the reliability of the parachute. No definite data seemed to exist on this subject, and it has frequently been recognized that such knowledge would be of value to the designers, the testers, and finally to the users of parachutes -- both those compelled to get a chute open as quickly as possible at low altitude, and those who, through a delayed opening, might try to clear a falling body or evade enemy gunners in time of war.

The tests were performed at night. The plane used was a Douglas Torpedo (DT Type) equipped with bomb shackles, releases, and dummy bays for drop-testing parachutes. Two dummies were dropped, one the size of an average man, weighing 180 pounds, complete with dummy pack; the other the same in size but weighing only 115 pounds complete. A 200-pound lead weight, with trailing dummy parachute pack, the assembly so arranged as to simulate the resistance and weight conditions of high speed parachute testing, was also used. The general method of testing was to drop from the plane a dummy with a light attached while a camera placed on the ground took a picture of the fall.

"The lights used in the first four tests," says Serial Report No. 2916, which gives a complete account of the tests with accompanying graphs, "were magnesium flares, commonly employed on wing tips. In the lead weight test, a 12 volt, 35 ampere electric lamp was used. In the dummy tests, the flare was clamped to a short piece of wood which formed an extension to one of the dummy's legs and was lighted by a battery mounted in the airplane. The electric lamp was mounted just beneath the lead weight and received its current from a small battery housed in the dummy parachute pack. In each test the lights were so mounted that they were visible from the camera position before the dummy or weight was released from the airplane."

In the first tests the camera shutter of the ordinary view camera was removed and a pendulum of proper length to swing at one second intervals was suspended in front of the lens. In later tests a "between the lens" shutter was used. This was held open by means of a spring and was closed once each second by a solenoid. The pendulum was removed from in front of the lens and arranged to make contact with a bubble of mercury at the bottom of each swing, thus closing the solenoid and battery circuit. This formed a more convenient and accurate timing device. The camera was set with the axis of the lens horizontal and the film vertical.

"When all was in readiness," again we quote from the report, "the airplane would take off and climb to the prescribed altitude. The pilot signalled with a flashlight when he was starting on the course, which was marked by blinking lights on the ground. The timing pendulum was then started and allowed to swing until the dummy or weight had reached the ground. The pilot maintained his proper altitude with a sensitive altimeter. It was important that he hold closely to the proper altitude and pass not too close to the camera as the image would not then fall on the film. As he approached the first marker light on his course, he switched on the dummy light and a few seconds later released the dummy."

"The data obtained in these tests will assist in clarifying previous records and establishing a basis for future work of this nature", says the Report, in true report form. It does not mention, of course, that a surprise element was brought out in the series of tests which rather played havoc with popular conceptions concerning the cumulative velocity of falling bodies and caused a riveted attention and a most careful checking of photographs on the

part of the engineers.

After the dummy left the plane, the horizontal velocity equaled the speed of the plane. But it was the vertical velocity that was especially under study. The velocity imparted by the plane diminished as the velocity due to gravity, or vertical velocity, increased, so that the resultant acceleration was not very great. The 180 pound dummy with closed parachute pack fell at a maximum rate of between 160 ft./sec. (109 m.p.h.) and 175 ft./sec.(119 m.p.h.) and gained this velocity in every instance in about 12 seconds time, having fallen from 1400 to 1500 feet, the velocity from there on to the ground remaining constant. Tumbling of the dummy diminished the velocity somewhat, the maximum velocity during rapid tumbling being 160 ft./sec. against 175 ft./sec. where it fell straight.

The maximum rate of fall of the 115 pound dummy, which was the same in size as the 180 pound dummy, was reduced from 175 ft./sec. to 125 ft./sec. These tests demonstrated that if a man jumped from an airplane traveling at 120 m.p.h., he would maintain approximately that same velocity until he reached the ground or opened his parachute. If he left an airplane traveling at a higher rate of speed than 120 m.p.h., his speed would rapidly diminish to that amount.

Tests along these lines will continue. It is contemplated with the aid of the moving picture camera to run a series to obtain the exact opening time of the parachute under various conditions. The use of the camera in connection with airplane tests of all kinds has proved a great boon and made possible truer records and more accurate observations than ever were otherwise obtained.

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AIR CORPS ENGINEERING SCHOOL REOPENS

After a year of inactivity, 1927-1928, due to the shortage of officers in the Air Corps, the Air Corps Engineering School reopened at Wright Field on July 1st, with Captain Edgar P. Sorenson in charge as Assistant Commandant under Brigadier-General William E. Gillmore, Commandant, and with ten student officers in attendance.

The course, which is an extremely comprehensive one for the year involved includes Applied Physics, Shop Practice, Business Administration, Material Laboratory Work, Electricity, Thermodynamics and Engine Design, and Aeronautical Engineering.

In connection with the course, Captain Sorenson states, the students will get in about 140 hours of flying each. Details concerning requirements for entrance and the work performed under the various departments may be found in Technical Bulletin No. 48, which may be had by interested officers upon application to the Materiel Division, Dayton, Ohio.

The next school year opens in July, 1929, and applications for entrance should be submitted by December next.

The following officers are enrolled in the present class: Major Adlai H. Gilkeson, Captain Hubert V. Hopkins, 1st Lieuts. Harold H. Carr, Muir S. Fairchild, Alfred A. Kossler, Jr.; Clements McMullen, James G. Taylor, 2nd Lieuts. John W. Bowman, Charles H. Caldwell and George F. Schulgen.

The Engineering School is located on the second floor of the Administration Building at Wright Field, Dayton, Ohio.

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AERONAUTICAL CELEBRATION AT SAN DIEGO, CALIF.

The City of San Diego, "The Air Capital of the West", is making great preparations for a huge aeronautical celebration for August 16th. It is planned to have four hundred airplanes in the air at one time, making one of the most remarkable dramas of the skies yet witnessed. This celebration will commemorate the 25th anniversary of the Wright Brothers' first successful take-off in a heavier-than-air machine, and will mark the dedication of San Diego's triple "A" airport -- "Lindbergh Field".

It is expected that the country's most celebrated airmen and those interested in aviation will attend this celebration, which the San Diego Chamber of Commerce is sponsoring. It is contemplated that in this celebration the Air Corps will have in all 102 airplanes, as follows: [illegible] from March Field, 60; Griffith Park, Los Angeles, 6; Reserve Camp, Rockwell Field, 10; Rockwell Air Depot, 6; 95th Pursuit Squadron, 15; and 11th Bombardment Squadron, 5.

AMBULANCE PLANES PERFORM GOOD SERVICE

During the Fiscal Year ending June 30, 1928, the three Army Air Corps ambulance planes in commission performed valuable service, an emergency arising in no less than 22 instances where patients were transported to hospitals via air because other transportation agencies were not available or because it was considered best for the patient's welfare to utilize air transportation on the score of comfort and rapidity of travel. Altogether four planes were utilized as ambulances during the past Fiscal Year, but no more than three were in commission at any particular time.

In transporting the 22 patients, the distance covered totalled 3,755 miles, the flying time 45 hours, and the time saved in transportation by air 320 hours and 40 minutes or, roughly, 17½ days.

Kelly Field, Texas; March Field, Riverside, Calif.; and France Field, Panama Canal Zone, are the Air Corps stations where the ambulance planes are in commission. The performance record of these planes for the past Fiscal Year is as follows:

Station	Type of Airplane	Cases Transported	Distance Covered	Time Taken	Time Saved
Kelly Field	XA-1	9	1760 mi.	19 hrs.	68 hrs.40 m.
March Field	C-1	4	649 "	7 hr.30 m.	20 hrs.
France Field	XA-1 & C-1	9	1346 "	18 hr.30 m.	232 hrs.

The ambulance plane was especially invaluable in the Panama Canal Zone, where transportation facilities are deficient. These aerial ambulance activities, although not extensive, are noteworthy in that they serve to demonstrate beyond a doubt the great value and practicability of the airplane ambulance as a means of transportation of sick and injured.

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EXPERIMENTAL PROJECTS WITH AIRSHIPS

Landing on the top of a building; picking up supplies from a moving truck; transporting a relief crew to salvage a wrecked airplane; landing on the deck of a steamer out at sea; conducting a search over Chesapeake Bay for lost flyers, and removing two men from a small boat by means of a rope ladder lowered from the airship were among the many missions performed by the two airships assigned to the 19th Airship Company at Langley Field, Va., during the past fiscal year, in order to test the scope of the airship's use.

These two airships, both of the TC type, were in commission every day during the past fiscal year. With a record of 183 hours and 35 minutes for the month of September and a total time of 1167 ship hours for the entire year, the 19th Airship Company broke all previous records for lighter-than-air training at Langley Field.

The landing on the top of the Newport News High School Building was one of the outstanding experiments of the year. There were three great handicaps to be overcome in order to complete this mission successfully,-- the small landing space available; obstructions on all sides, including power lines and buildings; and the fact that there was no head wind to check the momentum of the airship.

Another outstanding achievement was the landing of the Airship TC-5-251 on a moving steamer, loading a cargo and taking off again without halting the surface vessel. The landing was made on the after deck of the steamer "American Trader", about 3 miles off Ambrose Light, N.Y., on May 10th. The Chairman of the Shipping Board characterized the achievement as a new step in the coordination of air and water transportation.

When three Naval flyers were lost in the Chesapeake Bay, both airships were flown daily in search of them. Very high winds prevailing at the time did not prevent the missions being carried out. Fourteen flights were made for a total aircraft time of 50 hours.

An experiment to test the feasibility of picking up the crews of disabled aircraft from the water was carried out. A free balloon, partially inflated, was towed out into the water and set adrift, with a Langley Field officer as pilot. The airship's part in this mission was merely to proceed to Langley Field to spread the alarm, whereupon two speed boats were dispatched to the scene of the danger, picked up the pilot, and rushed him to the station.

The airships accomplished several photographic missions, cooperated in a

number of missions with the Coast Artillery Corps in connection with observing and correcting artillery fire, were flown on a number of cross-country training flights and cooperated in several problems with the 2nd Bombardment Group at Langley Field.

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TRAINING OF WEST POINT CADETS AT LANGLEY FIELD

The training of the 1929 Class of the United States Military Academy was carried on at Langley Field, Va., during the period June 10th to 29th. The class was divided into three groups of approximately 100 cadets each. The three groups were present in turn, and each group was present five working days. Eight dual instructors were furnished from Brooks Field for their training, and the number of PT-1 airplanes at Langley Field was increased to 13. Each cadet was given approximately five hours of flying, of which slightly less than two hours was dual instruction in the PT-1s. In addition, they were given lectures on the Air Corps by instructors from the Air Corps Tactical School and were shown instruction Air Corps motion pictures. Small groups of cadets were taken to the various departments, such as Parachute, Engineering, Machine Shop, Operations, Radio and Supply, where the work of the departments was demonstrated and explained.

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PARACHUTES AND THE FAIR SEX

Sometime ago the author of a story on free ballooning facetiously remarked that ladies do not go up in balloons because of the probability at some time or another of being compelled to use a parachute. Well, the fair sex who flew with Colonel Lindbergh over Washington wore the Army parachute and it appears that no fuss was made about it.

In the annual report of the activities at Bolling Field,D.C., for the Fiscal Year ending June 30, 1928, mention is made of the flights Colonel Charles A. Lindbergh made at the field when he took up for sight seeing tours over the Capital City members of Congress and their friends -- mostly friends, the Bolling Field scribe adds. Two airplanes were used in these flights, one a Fokker C-2 Transport from Bolling Field and the other a Fokker Transport from the Naval Air Station, Anacostia, D.C. The motors of these two planes were kept running continuously, and while one machine was in the air the other would be loaded and ready for Colonel Lindbergh to transfer to it.

Army Air Corps rules require that all passengers flying in an Army plane must wear the parachute. It was thought that the ladies would object to this but, on the contrary, they liked it, especially since they looked quite well in the coveralls furnished them. Sometime later one woman expressed a desire to borrow the outfit she wore on her flight, stating that she wished to wear it at a costume ball.

During these flights over one thousand passengers were carried.

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NEW CLASS AT BROOKS FIELD

The class of students which started training at the Primary Flying School at Brooks Field,San Antonio,Texas, on March 1, 1928, advanced to the Basic Stage on July 10th last to make way for the incoming class, numbering 119 students. Of this number the Infantry furnished 9 officers; the Field Artillery,6; Coast Artillery,3; Cavalry,3; Quartermaster Corps,1; total 22 officers. The remaining 97 students were made up of 87 Cadets from civil life and 10 Cadets from enlisted men of the Army.

All students reported in, received their various tests, including the Orientator test, and reported at the Primary Stage for instruction on July 16th.

With the entrance of the present class, the policy of eliminating students as a result of their failure to pass the Orientator test was abolished.

The first academic subject taught is the personal equipment of the pilot, which includes parachutes and all the equipment necessary to the pilot. The last period in this subject consists of demonstrations of parachute jumps on the airdrome, including dummy and live jumps.

AIR CORPS OFFICERS ON GENERAL STAFF ELIGIBLE LIST

The following Air Corps officers were recently placed on the eligible list for detail to the General Staff Corps:

Major-General	James E. Fechet	Major Eugene H. Lohman
Lieut.-Colonel	C.C. Culver	Major Ira A. Rader
Lieut.-Colonel	Charles H.Danforth	Major Ralph Royce
Lieut.-Colonel	Ira F. Fravel	Major Albert L. Sneed
Lieut.-Colonel	John H. Howard	Major Oscar Westover
Lieut.-Colonel	James A. Mars	Capt. Robert C. Candee
Major	Follett Bradley	Capt. Wm.B. Farthing
Major	Lewis H. Brereton	Capt. Lynwood B. Jacobs

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PILOT SEARCHES POTOMAC RIVER FOR BODY OF SUICIDE

Probably the first time the historic Potomac River was ever searched via airplane for the body of a human being occurred on the pet "Jinx" day of them all- Friday, the 13th. On that day in the month of July,Lt. Frederick A.Schauss Air Corps Reserve, stationed at Bolling Field, D.C., flew Lieut.Edward J. Kelly, head of the police homicide squad, in an O-1 over the Potomac River from Key Bridge to Great Falls, searching for the body of a supposed suicide.

It was the first time the local police had used an airplane in their work and they covered in a few minutes territory which would have required the harbor police launch more than an hour to go over. No trace of the body was found.

Lieut. Schauss on his return noticed the date on the calendar and stated that had he known it was Friday the thirteenth he would never have made a flight for such a purpose.

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FERRYING PLANES ACROSS THE CONTINENT

The ferrying of airplanes from place of manufacture to various fields and stations throughout the country still continues to be practiced in the Army Air Corps. During the months of June and July a number of deliveries of O2-H planes were made from the Douglas Aircraft Factory at Santa Monica, Calif. These planes were ferried eastward by Army Air Corps pilots via the Rockwell Air Depot, where they are checked over and serviced before leaving. Officers who recently ferried these planes from the west to the east coast were Lieuts. J.E. Upston, Robert E. Solff and L.W. Miller, on duty in the Office of the Chief of the Air Corps, Washington; Lieut. G.A.Whatley, of Maxwell Field, Ala., and Lieut C.W.Cousland of Post Field, Fort Sill,Okla.

One O2-H plane was ferried by Lieut. Miller to Maxwell Field and the remaining four were flown to Bolling Field, Washington,D.C. Riding as a passenger with Lieut. Cousland was Maj. Mason, of the Air Corps Reserve.

Major Albert L. Sneed, Commanding Officer of Rockwell Field, ferried an O2-H plane from the Douglas plant to Edgewood Arsenal, Md., bringing back to Rockwell Field a PW-9D from the Fairfield Air Depot. While in the East Major Sneed paid a visit to the Office of the Chief of the Air Corps.

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RESERVE OFFICERS RECEIVE TRAINING AT LANGLEY FIELD

By Lieut. Wilton M. Briney,A.C. Reserve

The 324th Observation Squadron, Organized Reserves, arrived at Langley Field, Va., for two weeks' training on July 8th. The arrival of this active reserve unit caused summer airdrome and academic activities to more nearly resemble the busy Langley Field during the 2nd Bombardment Group training period and the Air Corps Tactical School term.

The thirty Reserve officers arriving in this squadron, commanded by Major Walsey R. Bazley, Captain, Air Reserve, were divided into two flights. Flight leaders assigned were: Reserve Captains Louis T. Barry, Flight "A", and J.J. Feery, Flight "B". The flights functioned on a competitive basis during their training.

An innovation for Reserve training at Langley Field was successfully accomplished through the means of the flight contest. The events of the flight

competition were: A 3-ship formation; a 5 ship formation; an accuracy landing contest; the percentage of the Reserve rated pilots to be soloed in each flight; aerial gunnery; Field Order written by each flight leader to complete the mission assigned in a Field Order written by the squadron commander; flight promptness; appearance of flight quarters; military bearing and neatness of individuals; observation of ground puffs; flight scores on the pistol range; flight observation missions accomplished by flight observers; flight baseball game; flight golf tournament; flight swimming match.

As was expected by the camp executives, this flight contest did not meet with hearty approval of the reserve officers for the first day or two. "More flying, more service type airplanes is what we want", they said.

A marked change of attitude was apparent on the third morning of the training period. The spirit of competition had grown in the two flights until it was the subject of conversation at mess and in the barracks.

Maximum effort was put forth by each officer in each flight to see that his flight won every event of competition, resulting in a happy and beneficial two weeks' training period.

The Rotary Club and three banks of Hampton, Va., furnished cups for the winners.

Great interest was shown by the Reserve officers in a daily publication of their activities, called the "Squad News". Each Reserve officer was permitted to contribute anything he saw fit in this daily "Squad News". It resulted in a printed and bound record of all the squadron's military activities and pertinent remarks concerning its personnel during the two weeks' training.

At the end of the camp each officer was provided a mimeographed "Squad News" complete. To quote from the subhead "Pistol Range": "Yesterday proved one thing, and that was, we are in need of plenty of practice. The officers of this camp looked like a group of Pittsburgh police, who have never been known to hit anything." It may be mentioned here that more than 90% of the 324th Observation Squadron are from Pittsburgh.

Under the sub-head "Our Gesture", a verse appeared each day in the "Squad News". One is submitted here:

Flight "A" had Major Yost,
"B", Bobb Dake at the post
They flew and landed to a mark,
Our only one the flag to park.

When Captain Feery on his side,
Landed the PT very wide,
Laedlein for the other flight,
Certainly gave "B" a fright.

Then came Frank trying his best,
But not quite up to the rest,
While Massey proved how it is done,
His flying for the "B's" had won.

The final score showed 4 feet,
A small margin for one to beat,
Now "B" has this and pistol range,
Ahead of "A" who'll make a change.

Langley Field officers detailed for the Air Corps Reserve Officers Camp, July 8th to 21st, were: Camp Commander, Major Junius W. Jones, Air Corps; Senior Instructor, Captain Ernest Clark, Air Corps; Observation Officer, 1st Lieut. K.N. Walker, Air Corps; Camp Adjutant, 2nd Lieut. Ford L. Fair, Air Corps; Engineering Officer, 1st Lieut. R.W.C. Wimsatt, Air Corps; Recreation and Supply Officer, 1st Lieut. Wilton M. Briney, Air Reserve.

Seven instructors were assigned from the officer personnel of Langley Field, The five PT airplanes used by the Squadron were serviced by the 58th Service Squadron.

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CROSS-COUNTRY FLIGHTS FROM BOLLING FIELD

The month of July proved to be a busy one for cross country flying of Air Corps personnel from Bolling Field, D.C. During the first three weeks of the month a total of 61 cross-country flights were made, as follows:

To Langley Field, Va.	8	To Miller Field, N.Y.	2
To Middletown, Pa.	5	To Selfridge Field, Mich.	1
To Mitchel Field, N.Y.	19	To Leesburg, Va.	1
To Wright Field, Ohio	3	To Detroit, Mich.	1
To Philadelphia, Pa.	2	To Teterboro, N.J.	1
To Columbia, S.C.	2	To Indianapolis, Ind.	1
To Altoona, Pa.	3	To Pine Camp, N.Y.	1

To Lancaster, Pa.	3	To Aberdeen, Md.	1
To Shamokin, Pa.	3	To Herndon, Va.	1
To Hagerstown, Md.	2	To Groton, Conn.	1

In addition to the above, a number of local pilots ferried new airplanes from different factories to their destinations.

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THE BALLOON JUMPERS OF THE WORLD WAR

Much has been written, and will no doubt continue to be written, concerning the Caterpillar Club, that mythical organization of airmen who owe their existence on God's green earth today to the parachute which did not fail them in the time of greatest need.

In the last issue of the Air Corps News Letter a statement was made to the effect that 94 emergency parachute jumps have thus far been made. Since that time another member was added to the fold of the Caterpillar Club, thus making a total of 95 life-saving jumps to date.

Our attention was recently brought to a World War document, known as Report of Balloon Section, Volume 1, which gives a list of American balloon men who jumped to safety with a parachute from balloons which were attacked by emeny aircraft. It appears from this report that a grand total of 117 of such jumps were made in the zone of operations, 108 by officers and 9 by enlisted men. Of these 117 jumps, 59 were made from balloons which had been attacked and set on fire by enemy aircraft and 58 from balloons which were attacked but did not catch fire.

In the tabulation giving the names of officers and enlisted men who made emergency parachute jumps from imperiled balloons there are many repeaters. Of the total of 76 names listed, 26 men are credited with more than one jump.

It would seem appropriate to give the men who jumped for their lives during combat operations with the enemy a different designation from the men who took French leave of their craft in peace time. There is also the distinction that, with two exceptions, all the members of the Caterpillar Club jumped from airplanes, whereas the war time balloon jumpers under discussion made all their hops into space from balloons.

Pending a better suggestion, the title "Balloon Jumpers of the World War" is for the present conferred on the 76 men who made use of the bit of silk in order to live and fight another day.

The outstanding balloon jumper of them all was Lieut. G. Phelps, Air Service, who was credited with five jumps, three from burning balloons and two from balloons not set on fire. Four men on the list are fourth degree members of the new organization, viz: 1st Lieuts. Byron T. Burt, J.A. Higgs, J.A. McDevitt and W.J.R. Taylor, all of the Air Service. Through one of those strange coincidences, the third degree membership is also limited to four men, in the persons of 2nd Lieut. G.D.Armstrong, Field Artillery, 1st Lieuts. G.C. Carroll and Dache M. Reeves, Air Service, and Sergeant H.O. Nicholls, Air Service. There are 17 men upon whom the second degree was conferred.

The membership of the "Balloon Jumpers of the World War" is given below, as follows:

Names	Balloons Burned	Balloons Not Burned	Total Jumps
1st Lieut. F.L. Adams, A.S.	-	1	1
2nd Lieut. J.A. Allen, A.S.	1	1	2
2nd Lt. R.H. Anderson, A.S.	-	1	1
2nd Lt. W.S. Anderson,A.S.	2	-	2
2nd Lt. G.D.Armstrong,F.A.	1	2	3
Captain P. Arthur, F.A.	-	1	1
1st Lt. T.P. Atkinson,F.A.	-	1	1
2nd Lt. W.S. Parker, A.S.	-	1	1
1st Lt. F.R. Barton, A.S.	1	-	1
2nd Lt. L.L. Biche, A.S.	-	1	1
1st Lt. L.G. Bowers, A.S.	1	1	2
1st Lt. D.G. Boyd, A.S.	1	-	1
2nd Lt. J.S. Burrell, F.A.	1	-	1
1st Lt. B.T. Burt, A.S.	1	3	4
2nd Lt. R.E. Butcher,F.A.	1	-	1
1st Lt. G.C.Carroll, A.S.	3	-	3

Name	Balloons Burned	Balloons Not Burned	Total Jumps
1st Lt. B.M. Clark, A.S.	-	1	1
1st Lt. S.V. Clarke, A.S.	2	-	2
2nd Lt. A.B. Cole, A.S.	-	1	1
1st Lt. F.D. Cummings, F.A.	1	-	1
1st Lt. R.L. Davis, F.A.	1	-	1
1st Lt. R.L. Dold, F.A.	-	1	1
2nd Lt. P.W. Duell, A.S.	-	1	1
2nd Lt. H.E Dungan, A.S.	1	1	2
1st Lt. F.J Durrschmidt, F.A.	-	1	1
1st Lt. L.C. Ferrenbach, A.S.	1	1	2
1st Lt. J.M. Fox, A.S.	1	-	1
2nd Lt. C.C. French, F.A.	-	1	1
2nd Lt. E.M. Gallagher, A.S.	-	1	1
1st Lt. H.H.F. Gossett, F.A.	1	-	1
1st Lt. E.D. Harris, F.A.	-	1	1
2nd Lt. F.M. Henry, A.S.	-	1	1
1st Lt. J.A. Higgs	1	3	4
2nd Lt. H.H. Holland, A.S.	-	1	1
1st Lt. S.I. Howell, A.S.	2	-	2
2nd Lt. H.H. Hudnut, F.A.	1	-	1
1st Lt. S.W. Kellogg, A.S.	-	2	2
2nd Lt. J.W. Lane, A.S.	2	-	2
1st Lt. J.W. Lavers, A.S.	1	-	1
1st Lt. E.R. Likens, A.S.	2	-	2
1st Lt. W.C. MacBrayne, A.S.	-	1	1
1st Lt. J.A. McDevitt, A.S.	1	3	4
2nd Lt. E.S. Montgomery, A.S.	-	1	1
2nd Lt. H.E. Montgomery, A.S.	1	-	1
1st Lt. S.T. Moore, A.S.	-	1	1
2nd Lt. F.M. Morgan, F.A.	1	-	1
1st Lt. L.M. Murphy, A.S.	1	-	1
1st Lt. H.P. Neibling, F.A.	2	-	2
1st Lt. G.R. Nixon, F.A.	2	-	2
1st Lt. R.K. Patterson, A.S.	1	1	2
1st Lt. G. Phelps, A.S.	3	2	5
2nd Lt. G.E. Quisenberry, A.S.	1	1	2
1st Lt. D.M. Reeves, A.S.	2	1	3
2nd Lt. J.B. Rivers, F.A.	1	-	1
1st Lt. P.N.A. Rooney, A.S.	1	1	2
1st Lt. C.J. Ross, A.S.	1	1	2
2nd Lt. M.D. Sapiro, A.S.	-	1	1
2nd Lt. M.A. Sedgwick, A.S.	1	-	1
2nd Lt. W.D.M. Shuman, F.A.	-	1	1
1st Lt. M.R. Smith, A.S.	1	-	1
2nd Lt. A.R. Stubbs, A.S.	1	-	1
1st Lt. L.W. Taylor, A.S.	-	2	2
1st Lt. R.W. Thompson, A.S.	1	-	1
2nd Lt. J.H. Vernon, A.S.	-	1	1
1st Lt. J.H. Wallace, A.S.	1	-	1
2nd Lt. S.E. White, A.S.	1	-	1
2nd Lt. A.J. Zavoyski, F.A.	-	1	1
1st Lt. C.L. Furber, F.A.	1	-	1
Corp. L.S. Balay, A.S.	1	-	1
Sgt. N. Brunell, A.S.	-	1	1
Sgt. S.C. Burnham, A.S.	-	1	1
Sgt. J.L. Cain, A.S.	-	1	1
M.E. Meyer L. Cohn, A.S.	-	1	1
Sgt. H.O. Nicholls, A.S.	2	1	3
Pvt. Robert Scott, A.S.	-	1	1
Total	59	58	117

UNUSUAL PARACHUTE JUMPING EXPERIENCE

Seven enlisted men stationed at the Primary Flying School at Brooks Field, San Antonio, Texas, recently made their first attempt at a live parachute jump. One of these men went through a most unusual experience. After leaving his plane and pulling the rip cord of the parachute he drifted into a rising air current and, instead of dropping at the normal rate a parachute descends to the ground, between 18 and 27 feet per second from an altitude between 800 and 1,000 feet, according to tests conducted sometime ago by the Air Corps at Dayton, Ohio, he hung practically stationary in the air for a period of two minutes. His rate of descent averaged approximately three feet per second, probably the slowest rate of descent on record anywhere. The jumps were made from a seven-ship formation flying at an altitude of 2,000 feet.

Here is what the SECOND DIVISION REVIEW, San Antonio, Texas, has to say regarding the above incident:

"This may be news rather than humor, but Bill is willing to bet the unspent portion of last month's pay that it was not funny to one man.

"A group of would-be aviators at Brooks Field went up for a parachute jump last week. It was the first jump for all of them, and they were trying to gain confidence. The idea was that once they realized how nice it was they would want to make jumps instead of yachting trips over the week end. One young man, however, may be convinced now that parachuting is safe, but there was a while in which he was willing to exchange the thrills of the air for a little bit of terra firma.

"He stepped overboard at 2,000 feet, counted five, or maybe only three, pulled the ring and waited for developments. He got them. With a loud thump the chute opened and his fall was checked. A beautiful feeling of serenity stole over him. It was joy supreme. The easy glide earthwards was going to be one bit of real pleasure. And then it happened. Instead of falling he began to rise. His parachute was taking him in the general direction of the moon, and it looked for a time as if he were leaving for good. An upward rush of air had caught the lad and he was up higher than the start in almost no time. He finally came back to earth, but at last reports was not volunteering for any more parachute jumps."

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BROOKS FIELD STUDENTS GRADUATE

An impressive review featured the graduation exercises for the June class at the Air Corps Primary Flying School at Brooks Field, San Antonio, Texas, on June 29th. The review was followed with an address by the Commanding General of the Air Corps Training Center, General Frank P. Lahm, Air Corps. The exercises were witnessed by about 5,000 people from San Antonio and the immediate vicinity.

The curriculum of the Primary Flying School was changed on July 1, 1927, from five months to eight months' duration, the basic training formerly given at the Advanced Flying School at Kelly Field, Texas, having been included in the curriculum of the Brooks Field School.

It is interesting to note that the number of students who graduated in the last two classes increased approximately 20 percent over that in the preceding classes.

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BOLLING FIELD PERSONNEL RECEIVE UNEXPECTED BATH

By the News Letter Correspondent

Lieut. Myron R. Wood, Air Corps, recently gave seven enlisted men from Bolling Field a cold bath when he landed a C-1 in the Potomac River near Alexandria, Va. While flying at an altitude of 2,000 feet, the motor froze and, unable to reach a satisfactory field, the pilot decided to land in the shallow water off shore.

Gliding down as slowly as possible, it seemed as though Lieut. Wood would make a perfect landing, but when about fifty feet above the river the transport fell off and dived straight for the water. Helping members of the crew from the rear cockpit to the wings of the ship, Lieut. Wood dived under the water

in search for Private Standoven, who was rendered unconscious when the plane struck the water. He pulled the injured man to the surface and again dove on a second search of the fuselage.

All members of the crew were badly shaken when the plane struck and, in addition, most of them had cuts or bruises more or less serious. Private Thomas Standeven and Private Joseph A. Droter were taken to Walter Reed Hospital, and the remainder were treated by Major Robert Hale, the Flight Surgeon at Bolling Field, who hastened to the scene of the crash in the Navy speed boat.

Sergeant William B. Brockaway, Sergeant Rudolph J. Lehutta and Privates Frank Lukoville, Oscar E. Johnson and L.A. McCaughey remained with the plane to assist in bringing it in.

On his return to Bolling Field, Lieut. Wood stated that he believed a loose or broken water connection had caused the motor to freeze.

All members of the crew praised the coolness of Lieut. Wood, and the officers of the post declared that only great luck in addition to unusual flying ability on his part saved the lives of the seven men.

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BROOKS FIELD FLYERS PAY HOMAGE TO THE LATE CAPT. CARRANZA

A forty-ship formation, consisting of eight 5-ship units, took off from Brooks Field, San Antonio, Texas, at 3:20 P.M., July 19th, to participate in the homage paid Captain Emilio Carranza, noted Mexican flyer, who met an untimely death in an airplane crash while returning to Mexico City from his Good Will Flight to the United States. One 5-ship formation met the train outside of the city limits and escorted it into San Antonio, meanwhile dropping flowers on the car bearing the dead flyers's body. The remains of Captain Carranza were removed from the train and taken to the Municipal Auditorium under military escort. The planes remained aloft rendezvousing over the city while the body was lying in state until 6:30 P.M.

On the following day a 15-ship formation from Brooks Field, led by Lieut. Wendell Brookley, left the airdrome at 5:30 A.M., and proceeded to Laredo, Tex., for the purpose of participating in the services held for Captain Carranza. While the body was being escorted across the International Bridge, the formation from Brooks Field came down to an altitude that permitted the dropping of flowers on the bridge and casket.

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CAPTAIN MACREADY RECEIVES DISTINGUISHED FLYING CROSS

By A.M. Jacobs

In the Wright Field Auditorium at 11:30 A.M., July 28th, the "Distinguished Flying Cross", awarded by Congress for outstanding flying accomplishments, was conferred upon John A. Macready, Captain, Air-Res., by Brigadier-General W.E. Gillmore. The ceremony was performed in the presence of "Lieutenant" Macready's family, a group of his friends and the civilian and military personnel of Wright Field.

General Gillmore, in making the presentation, said, "We are gathered here this morning to pay honor to one of the country's most distinguished airmen, one who through his knowledge and skill has proved himself thoroughly deserving of that honor. Twice, Lieutenant Macready has been officially acknowledged as holder of the World's Altitude Record. Many think of that feat as merely getting into a plane and climbing with it as high as it will go. They do not know of the weeks and months of preparation involved, of the physical, technical, professional fitness essential for its successful accomplishment. Lieutenant Macready was also a co-pilot of the Army Transport T-2 in the only non-stop crossing of the continent made to date. He has ever been a hard, keen worker and in every undertaking has brought credit to the Army, to his field, and to himself. The Army was sorry to lose Lieutenant Macready when a few years ago he resigned to take up other work, but it has followed his career with interest and best wishes for his success. And now it is a great pleasure to have the honor to present to him, in the name of the President of the United States, this Distinguished Flying Cross, awarded him by Congress. I will read the official citation."

After reading the citation, General Gillmore pinned on the decoration.

Lieutenant Macready responded by expressing his appreciation of the honor accorded him.

"Though no longer active in aviation circles", said Lieutenant Macready, "I hope to see the time when officers and members of the flying service who have been the backbone of aviation receive the credit due them. Many here today have done work of great importance. Recent advancements in aviation are due to nothing so much as the pioneering development work performed by the trained personnel of this service. I am proud once to have been a member of it."

Senator Simeon D. Fess and Congressman Roy G. Fitzgerald were then called upon by General Gillmore. Senator Fess expressed his faith in the continuing progress of aviation and said the day would come when people would be taking the air routes for safety. He promised every support on the part of the Government in this new development. Congressman Fitzgerald spoke of the new Wright Field and its place in aviation; of his long association with Lieutenant Macready and described in detail a flight made with him over the mountains in storm and a forced landing. He recalled Macready's night parachute jump, the first made in emergency, and finished by characterizing him as the coolest, ablest, cleverest, most courageous person he had ever known.

The new auditorium, large and pleasing to the eye, is an especially fitting place for the conferring of honors, and it is hoped many will find their way through its portals in the time to come. Flyers who have worked hard to have done it chiefly for the joy of the work, not expecting recognition. But unexpected recognition is especially easy to take and the fact of delay would but add savor. How we'd like to see some of the pioneering ventures of flight, daring, colorful and hazardous in the extreme with the old unreliable equipment, take their places in the sun along with the newer successes which an awakened public has been so ready to acknowledge! Some one has said that any flyer on active status through the last ten years and still alive to tell the tale has done "distinguished" flying. Undoubtedly true and all credit to them. And in the annals of some of these distinguished flyers lie certain brilliant flights which have definitely along the early ways marked milestones in aviation advancement. The "cross" would lose nothing in prestige by being diverted backward to help mark these milestones for all time to come, and what an unlimited satisfaction to all concerned it would be to see the pilots of these flights come into their belated rewards!

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DEATH OF LIEUT. CHARLES B. AUSTIN, AIR CORPS

The grim reaper has taken away from the ranks of the Air Corps one of its most promising officers -- Lieut. Charles B. Austin, who died on July 27th at the hospital at Fort Monroe, Va., from acute cerebro-spinal meningitis.

For a number of years Lieut. Austin was on duty as instructor at the Air Corps Tactical School at Langley Field, Va. He was slated to attend the Command and General Staff School at Fort Leavenworth, Kansas, for a two-year term starting next September. In being detailed as a student at this school a precedent was created for the Air Corps, if not for the entire Army, for the practice has been to limit details of students to officers not below the rank of Captain. Lieut. Austin's exceptional services at the Tactical School, however, was the factor which weighed heavily in his favor. Unfortunately, he was not fated to be the first junior Air Corps officer to attend this School.

Lieut. Austin was born on July 7, 1891, at Vermilion Grove, Ill. Graduating from the DePauw University, Greencastle, Ind., he served as an instructor in mathematics at this university during his senior year. For four years following his graduation in 1913 he was Secretary and Treasurer of the Avalon Orchard Tract Co. of Kuna, Idaho.

During the World War, Lieut. Austin enlisted in the Aviation Section, Signal Corps, and he received his ground school training at the University of Illinois. Graduating on December 8, 1917, he was transferred to Waco, Texas, for his flying training, received his R.M.A. rating March 30, 1918, and was commissioned a 2nd Lieutenant. From April 10 to August 22, 1918, he was stationed at Ellington Field, Houston, Texas, where he pursued the course for bombing pilots, following which he was ordered to duty overseas. All of his overseas service was in England. Arriving in that country in September, 1918, he served as Commanding Officer of Flight A, 140th Aero Squadron, and later as

Commanding Officer of the 92nd Aero Squadron (Bombardment). He also served as flying instructor on Farmans, RE-2Es and DH-4s

Upon his return to the United States early in 1919, he was ordered to duty in the Panama Canal Zone, and while there was commissioned a 1st Lieutenant in the Air Corps, Regular Army, on September 18, 1920. In the latter part of that year Lieut. Austin planned a flight from Panama Canal Zone to Washington, D.C., via Kingston, Jamaica; Havana, Cuba; Carlstrom Field, Fla.; and Fayetteville,N.C. He started on this flight on October 6, 1920, but after flying over the ocean for 10½ hours and completing 400 miles, he encountered heavy storms which damaged his propeller and forced him to turn back. The atmospheric conditions were so severe that the entering edges of his wings were worn down so that the linen coverings were practically threadbare. The propeller tips, not having let go simultaneously, had the effect of setting up a tremendous vibration with the consequent immeninent danger of engine failure. This continued until the second frayed tip finally let go and the propeller began to balance up. During about 2½ hours of his flight he was flying through a blinding tropical storm of great violence.

Having flown for such an extended period over a wide storm area, with no prospect of issue therefrom, Lieut. Austin felt that his chances of hitting Jamaica were, under the circumstances, dicidedly slim, and therefore decided to retrace his steps and return to Colon, Panama, which he reached in due time and managed to make a safe landing.

The concept of this flight, Lieut. Austin's careful and efficient preparations for it, and the daring and consumate skill and resourcefulness which he exhibited during its execution mark it as an outstanding achievement in aeronautics up to the year 1920.

While on duty in Panama, Lieut. Austin served as Flight Commander of the 7th Squadron and as Commanding Officer of the 12th Photo Section. Upon his return to the continental limits of the United States, he was assigned as Engineer Officer of the 14th Squadron at Langley Field, Va.

During the Pulitzer Races in 1922 at Detroit, Mich., Lieut. Austin took second place in the Detroit NEWS Aerial Mail Trophy Race. He was a participant in the flight of six Army planes from the United States to San Juan, Porto Rico, and return, a project which involved a distance of nearly 8,000 miles.

Detailed as a student at the Air Corps Tactical School, Langley Field, for the 1923-24 term, he graduated on June 14, 1924, and shortly thereafter was assigned to duty as an instructor at this school.

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A NEW MOTOR BALLOON

By A.M. Jacobs

We have all seen a small potato growing on a very large potato, though we never expected, perhaps, to see the combination take to the air and fly. But we can think of no better way of visualizing a new motor balloon, which recently underwent flight testing at Wright Field, Dayton, Ohio, under the direction of Mr. W.E. Huffman, of the Materiel Division, for the purpose of determining the military value, if any, of this new type of lighter-than-air craft.

Although developed entirely through commercial initiative for advertising purposes, the unique design, simplicity of construction and operation, and low cost attracted the attention of the engineers of the Materiel Division who thought they saw a possibility of utilizing it for observation purposes, an idea which the aforementioned tests rather tended to confirm.

The balloon, which is non-rigid, with an overall length of 70 feet and maximum diameter of 30 feet, is the smallest controlled lighter-than-air craft ever built in this country. Power is furnished by a Henderson 4 cylinder engine. A light car accomodating two flyers hangs beneath the main bag. The unique features, however, lie in the pear shaped main bag and the subsidiary bag (or small potato) attached to the rear. Other airships have invariably had rigid control surfaces. In the Motor Balloon, this small bag forms the control elemen' it being moved up or down as an elevator or to either side as a rudder, the control lines extending between it and the altitude wheel and rudder bar in the control car. Another feature is its shortness -- it is just twice as long as it is thick -- which permits ground handling and flight at zero pressure. It is easily portable, having been transported five hundred miles to Wright Field on

a trailer in tow of a light passenger car. The rigging is simple and it can be set up, as can the free balloon, in an open field. This is in contrast with present airships which must be rigged in a hangar with a period of days for each inflation. It may be inflated without even the inflation net customarily used with balloons, the load lines serving the same purpose. Also it is easily maneuvered on the ground, all parts being high and clearing nicely during periods of yaw and pitch.

The three test flights of July 18, while demonstrating that the Motor Balloon is still in the experimental status, more than proved its possible value from a military point of view. "Developments thus far have proved", writes Mr. Huffman, "that this type of motor balloon is far more economical, both in the initial cost and in operation, than any type developed in the past. Although complete test flights have not been made, it is believed from observation of flights to date, that an airship of this type properly rigged and provided with ample power would be more highly maneuverable in flight than the conventional type of airship. It has been definitely proved that it is convenient and easy to handle on the ground with a small crew, and that it can be erected in the open with no more difficulty than would be encountered with a free or observation balloon. One of the outstanding features is the low cost. The initial cost of the experimental ship, including design, is understood to be $5,000.00 With proper care in holding down weights and with correct engine and propeller installation, it is believed that this ship could operate on flights of eight to ten hours with two men at a speed of twenty-five m.p.h. From a cost training point of view, four or five of these ships of helium volume could be used for primary training of airship pilots at about the same initial cost as one standard training ship.

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CERTAIN ASPECTS OF AVIATION MEDICINE

In a lecture recently delivered by Lieut.-Colonel Levy M. Hathaway, Medical Corps, Flight Surgeon, on duty in the Office, Chief of the Air Corps, Washington, on the subject of aviation medicine, he stated that whatever were the purposes of the creator and whether created in his present form or evolved from some lower order of life, it must be conceded that man was not primarily fashioned to fly.

When some 25 years ago man made for himself mechanical wings and undertook the conquest of the air, he ventured beyond the confines of an age old racial environment. As a terrestrial organism it might have been anticipated that he would encounter difficulties and undergo stresses in accordance with the degree of his deviation from the physical characteristics of those aerial forms of life which have been specialized by nature in every organ for a particular purpose.

What the birds do naturally and easily, man must accomplish mechanically. Meanwhile, he cannot change his physical makeup to conform to these new requirements; his organs were not primarily fashioned to function perfectly under the conditions imposed by this entirely new environment. The demands on his earthly constitution must be greater than generally realized, since it is to be inferred that such an unaccustomed task must entail stresses and strains in proportion as a man is physically and psychically unspecialized for its performance.

It is true that man has great powers of adaptability, otherwise he could not fly at all, but it is equally true that he is not specialized for flying; if he were he would probably lack that adaptability which makes him what he is. It is a biological law that function precedes structure. Effort precedes development as demand creates supply. It may be that man's physique and personality will eventually undergo profound alteration as a consequence of this, his latest extensive endeavor. When men have been flying as long as they have been walking, future men may develop anatomically and physiologically in conformity with the special requirements of aerial locomotion as practiced by the human race. Meanwhile, man is handicapped to whatever extent his anatomical equipment and physiological processes are inadequate to meet the specific demands.

Although man does not need wings nor feathers, since these he has supplied by material fabrications of his own invention, he needs other things equally important in flying and until by further invention he has devised and improved aids to navigation, he must depend largely upon his natural physical equipment to meet whatever is required in the accomplishment of his undertaking.

We cannot doubt the wisdom of the Creator in adapting special forms of life to their especial needs, nor is it in accordance with the economy of nature to

lavish her endowments indiscriminately without regard to need. The earthworm does not need eyes and it has none. The eyes of the mole are rudimentary, being no longer essential to its mode of life. On the other hand, the eyes of birds are marvelous, greatly superior to our own. Because of their mode of life they needed good vision and they developed it. We do not know how many generations of eagles and their progenitors lived and died before one was hatched which could descry its prey from such enormous heights as to remain itself invisible from the earth below; nor do we know how many generations of owls were bred and born before one could see well enough to fly in the dark. These birds have specialized as pursuit pilots since the world began. Each is fully equipped for his own work, but the eagle rests by night and the owl by day; whereas man, the newcomer, flies both by day and night.

Birds have excellent visual accommodation, eye muscle balance and depth perception. We have seen a hawk fly at a terrific speed among thick shrubbery in pursuit of its equally swiftly dodging prey, while pursued and pursuing alike avoided collision with any obstacle. Wild fowl fly wing to wing in formations which military airmen by conscious attention and unceasing vigilance strive to emulate. Let one of our pilots in such a formation relax for a moment or misjudge the distance to another plane -- the wings touch and the planes fall to earth. Not so the wild fowl equipped by nature for formation flying.

They also have other equipment which we may envy. It would be easier for our pilots if they, like the carrier pigeon, had in their heads some natural equivalent of an earth induction compass combined with a Bank and Turn Indicator which would enable them to find their way through darkness, wind and fog across those trackless skies which separate the continents.

When the earth is obscured by clouds and the horizon invisible, the airman cannot depend upon any inherent sense of equilibrium or of direction. He is inadequate in this respect, as in many others pertinent to flying. Bred on the ground, he is physically adapted only to moderate changes of barometric pressure and equivalent oxygen supply. Deprived of his accustomed alveolar oxygen pressure at high altitudes, his judgment suffers, conscious attention fails, circulation likewise, and unless relieved he perishes. Adjusted to slow locomotion, his organs are none too tightly anchored to resist the violent and sudden change with relation to gravity and inertia which aerial acrobatics demand. These acrobatics are essential to military maneuvers and combat; the Army pilot must outfly the enemy or suffer defeat.

In the preceding remarks an attempt was made to indicate that flying is rather a difficult task because it is foreign to man's biological development and alien to his natural experience. Yet all over the world men are flying faster and farther, and none can say what the end of this era will be nor what the cost in health and longevity to be reckoned against their calling by these Argonauts of the air. In this strange new pursuit men are subject as never before to unwonted strain which must and does affect their bodies, not only in visible, tangible ways but doubtless equally so in manners more obscure.

The task of the military airman is particularly strenuous in that it oftimes involves the execution of a difficult and hazardous mission in addition to flying. To him the latter is only a means to an end. During active operations he must watch all parts of the sky incessantly for hostile aircraft and destroy or else escape them. Night flying is extremely fatiguing and bombing in active operations is usually conducted at night. This calls out the pursuit pilots to destroy enemy bombers and pursuit planes. Night flyers habitually suffer from staleness. High altitude flying is often a tactical necessity and is extremely exhausting when long continued.

In general, military flying under active conditions demands a high degree of skill and physical fitness. The military pilot must be able to fly automatically, devoting conscious attention to the performance of his mission and leaving to subconscious processes the operation of an aircraft which in his case may be regarded as only a means of transport and a mount for his gun, camera, radio or bomb.

All this involves strain on the human economy and its effects are manifested in various manners and degrees. Among the more visible and demonstrable effects of flying are those manifested upon the eyes and ears. Eyestrain accompanied by headache is often felt by aviators and mentioned after a long flight. Slight errors in refraction or imperfect goggles increase this eye strain. Physical examinations conducted immediately after a fatiguing flight may disclose eye muscle imbalance which clears up after rest.

Most of these effects are temporary, but the cumulative results of long continued flying appear likely to leave permanent traces. Because of their strict physical examination, military pilots begin with excellent occular equipment and better than average vision. Since normal eyes wear better than abnormal ones, we may not expect any very startling figures from Army statistics. The figures for the Fiscal Year ending June 30, 1927, show that of 795 Regular Army pilots, there were 51 flying with waivers for defective vision, 9 with defective eye muscle balance and one with defective depth perception.

Defective hearing is common among aviators and is generally considered occupational. Many flyers are slightly deaf though it may not be noticeable except through watch test or audiometer. Deafness tends to progress in flyers. The roa of a 400 horsepower engine is terrific. Conversation is drowned in its presence. Communication is by signals. This noise, together with the effects of rapidly changing atmospheric pressure on the delicate structures of the auditory apparatu soons dulls the sense of hearing. These effects are cumulative, becoming permanent with continued exposure to the cause. Prolonged exposure to cold winds cause and aggravates catarrhal processes in the upper respiratory passages, and these extending to the middle ear produce sclerosis and retraction of the membrana tympani, occasionally resulting in otitis media. The labyrinth is probably badly shaken up on occasions and we do not know how much it may be damaged or deranged by such rough treatment, but the principle changes are probably in the middle ear and its outer wall, the tympanic membrane.

It is unsafe to fly with obstructed eustachian tubes, since the unequal pressure so engendered has caused intense earache, temporary disturbances of vestibular equilibrium, and even resulted in ruptured ear drums. Forced landings have been recorded in such cases.

Aside from minor losses of hearing, only demonstrable by the watch and audiometer, there were at the close of the last fiscal year among 795 pilots, 23 flying with waivers and one disqualified for deafness.

There is a high incidence of neuroses among aviators. These men are especially selected by careful physical examination more rigid in its requirements and standards than for any other arm of the service. It may be taken for granted that man for man they are probably as capable of withstanding nervous tension and shock as well if not better than the average soldier or officer. They certainly like their profession, the vast majority being enthusiastic flyers and only losing this attitude when in ill health or stale from being over-worked and over-flown. Out of 795 pilots on June 30th last, there were 9 physically disqualified for conditions classifiable under "instability of the nervous system". Also 14 pilots were temporarily removed from flying and 438 days lost as a result of neuro-circulatory asthenia. This is a condition generally recognized as occupational in aviators. The rate for N.C.A. for the entire Army is .53, which is approximately 1/27 of the Air Corps rate. It is probable that but for painstaking care by the Corps of Flight Surgeons who are always on the lookout for incipient staleness, the incidence and severity of neuroses would be higher.

When an aviator becomes stale he is unsafe to fly. Definite anxiety neuroses and fatigue neuroses likewise indicate grounding and are regarded as occupational by Flight Surgeons and flyers. In suitable cases a short rest and change often works wonders, and men who display such evidence of nervous strain as worry, anxiety, fatiguability, insomnia, occupational dreams, increased psychomotor tension, and low Schneider Index are frequently rebuilt by timely rest and reassurance.

When the nervous system is deranged, every organ is deliteriously affected. Gastro-intestinal complaints, slight and serious, are common among aviators and may in many cases be justly attributed to nervous influences which may or may not have been caused by flying. It is the impression of many Flight Surgeons that gastric and intestinal disorders are somewhat more prevalent among flyers than among others, although we have no statistics to establish or disprove this opinion.

No man can doubt the influence of the emotions on the entire systemic economy. We see frequent examples of this influence. Bad news upsets the digestion. We read that eight or ten persons died from the excitement of listening to the broadcasting of a prize fight. The sight of a snake paralyzes some persons, so that they are incapable of flight.

Comparatively little is known of the actual physiology of the emotions. We know, however, that certain ductless glands are vitally concerned in matters relating to the nervous system. Modern psychology is becoming more and more concerned with the effect of the emotions on behavior. Several recent books on this

subject have had a phenomenal circulation, indicating the widespread interest aroused. There is, perhaps, no field of human activity which demands as taut a rein on the emotions as does flying. It is significant that that form of behavior we call fear in an unconditioned (untrained, inexperienced) child, is brought forth by only two stimuli, namely, loud sound and loss of support. This reaction is, then, instinctive, for these two stimuli only, so far as known.

Fear of falling (or aversion to flying) is not only almost universal but is a perfectly natural reaction - instinctive. Rage and love or affection are the only others. The emotions are no longer looked upon as mental states but are ways of "behavior" which have to be learned like other habits. They are responses to the numerous varied daily experiences and contacts (conditioned responses to conditioned stimuli) and are elaborations of the three primitive reactions just mentioned. It is interesting to us as Flight Surgeons that experiments now being conducted seem to indicate that unconditioning can be brought about - emotional reactions can be removed as well as implanted. Both claims of psycho-analysts have not, however, been altogether realized.

Modern psychology gives great weight to subconscious influences. Complexes buried in the subconscious, though banished, are not dead. They still strive for expression; subconscious fear, though repressed or even suppressed below the threshold of consciousness, may yet be active and destructive when applied over long periods of time.

Emotional control is essential to meet the frequent emergencies encountered in flying. Never for an instant can a flyer afford to "lose his head". Stability of the nervous system is essential in a pilot. Any nervous weakness is apt to be brought out under the severe strain, constant alertness and feeling of responsibility which this occupation entails.

It has been said that airmen as a class are somewhat tempermental. They are probably not any more so than the general run of humanity. Flyers come from the same sources of population as men who follow other callings. It is possible that as a class they are somewhat more adventurous. The profession of flying demands rather more daring than most ground pursuits and the flyer having to depend upon himself while in the air naturally develops self reliance and individualistic qualities. Any neurotic tendencies are justly attributable to his occupation rather than to temperament. The act of flying demands constant alertness on the part of the pilot. He must constantly realize the fact that something is likely to go wrong and necessitate a forced landing or even a parachute jump. Not only must he watch his instruments but must scan the ground for a possible landing field to be utilized when necessity demands. For him, as in no other arm of the Service during peace, it is always a matter of active operations, as our annual casualties show. During the last calendar year there would have been about 20 more fatalities except for the parachute. The latter is a life saver; nevertheless, it takes considerable nerve to step out into space pull the rip cord and trust the rest to fate.

It is believed that not every man possesses the nervous stability to work daily under this realization and to feel or show no effects. It is not implied that airmen fly in a constant state of dread or nervous tension. On the contrary they are usually relaxed and at ease. They are trained to relax, and those rare flying students who "freeze the stick" never become pilots.

Among the primary symptoms of fatigue or incipient anxiety neurosis are occupational dreams of air accidents. When the pilot begins to dream of crashes he becomes a fit subject for concern by the Flight Surgeon. The nervous system in flyers is directly or indirectly affected by other factors aside from fatigue and possible subconscious fear. Eyestrain is a potent cause of headaches and asthenopic symptoms common among aviators. As previously said, ocular muscle imbalance is increased by long flights, especially at high altitudes.

The effects of anoxemia are extremely insidious. Low oxygen pressure at first over stimulates the nervous system, producing in many individuals an euphoric condition similar to alcohol; judgment and conscious attention fail, neor-muscular coordination is impared, the cardiovascular system is at first over stimulated and later depressed, and if the condition continues too long death or permanent injury may result. Balloonists have fainted at high altitudes and recovered on descent to lower levels. Many pilots declare that they feel fatigued after a long flight above 5,000 feet than after a similar flight at lower levels. This is natural, as the heart is working over-time and compensatory processes are mobilized to maintain adequate circulation. The effects

of cold are keenly felt at high altitudes, and it is almost impossible to dress comfortably.

The effects of sudden changes in speed and direction concomitant with aerial acrobatics call for compensatory adjustment by the circulatory system. In pulling up from a steep dive, at the rate of 280 miles an hour, there is bound to be some temporary cerebral anemia and corresponding congestion of the splanchnic vessels. One who executed the unusual maneuver known as the outside or inverted loop, wherein he dived from an altitude of 8,000 feet, describing a great circle 2,000 feet in diameter, while suspended against gravity and centrifugal force by his safety belt, mentions casually that in this maneuver all loose parts about the plane, including the blood of the pilot, tend to be thrown out. He states that the blood "coming to his head, while not at all dangerous, is most uncomfortable". This pilot's eyes were said to have been blood-shot for a while, but apparently he has suffered no permanent ill effects and is still going strong. It is said that pilots have momentarily fainted and recovered while in the air.

Air sickness is a common phenomenon among beginners and occasionally cannot be overcome. Whether attributed to nervous instability, cardiovascular stresses or to the effects of unaccustomed motion on internal organs, the fact remains that man was not primarily adapted to withstand such great strains and it is, indeed, surprising that he holds together as well as he does. After we have flown for as many years as we have walked the earth we may expect to develop greater powers of resistance and more aptitude for aviation. Until that time comes we may expect to encounter the effects of flying either as occupational neuroses, fatigue neuroses or possibly organic changes in various organs and systems.

Aviation being such a new occupation, there are comparatively few elderly flyers engaged, and statistical data is not yet available to prove or disprove whether flyers as a class fail faster than other men. A prize fighter is "old" at thirty-five. It is generally conceded that the average man begins to feel the effects of advancing age around forty and that at about fifty, more or less, he is no longer able to follow strenuous pursuits. We believe that this applies to airmen, and future statistics will show whether they tend to deteriorate at an earlier age than officers of other arms.

To be Continued.

Langley Field, Va., July 25th.

The 2nd Bombardment Group activities, because of this season, are at the minimum.

Coast Artillery Reserve officers on duty at Fort Monroe, Va., were given training flights in Bombers. Reserve officers on two weeks' duty at other Army posts in this vicinity were also taken for practice flights.

Three new Reserve officers who graduated from Kelly Field on June of this year - 2nd Lieuts. James N. Peyton, Charles S. Vaughn and Cassius H. Thomas, reported to Langley Field, July 9th and were assigned to the 49th Bombardment Squadron in the 2nd Bombardment Group.

The several beaches in the vicinity of Langley Field are sources of great pleasure to the officers and their families and the enlisted personnel. Sometime ago everyone received their first sunburn and consequently are comfortably tanned for surf bathing.

Captain Sam Browne, Flight Surgeon at Kelly Field, paid a brief visit to the post.

Major Walter H. Frank left July 23rd for Cape May, N.J., to join Mrs. Frank and Miss Helen Frank. They will spend the summer season in the Adirondacks.

19th Airship Company: Colonel C.G. Hall, of the Army War College, and Major J.D Reardan, of the Chief's Office, recently made two training flights in the TC-10-254.

Orders were received from the Chief's Office attaching 1st Lieut. R.P. Williams to this organization for flying duty only. He is at present on temporary duty at the U.S Naval Academy, where he is taking the course in Aerology. Lieut. Williams recently made three training flights with us.

The Airship TC-5-251 made a demonstration flight on July 3rd over the Nansemond River and Chuckatuck Creek Bridges as part of the program celebrating the opening of same.

Two special observation flights were made on July 5th for the Post Flight Surgeons, Major B.B. Warriner, Captains I.F. Peak and H.S. Steenberg.

Although our flying activities were slightly hampered by rain during the past week, our schedule of flights was carried out quite successfully. On July 9th and 11th special demonstration and coast patrol flights were made for the Coast Artillery Reserve officers stationed at Fort Monroe, Va.

A flight for observation of Field Artillery fire at Fort Eustis, Va., was made by the TC-10-254 on July 12th. Observations and corrections were made by radio, and the results obtained were highly satisfactory to the Artillery officers. Captain Sharp and 1st Lieuts. Bassett and Roberts, all of the Artillery, were the special observers on this flight.

Lieut. Wm.J. Flood reported for duty July 13th. He completed the Special Observers' course at Kelly Field, Texas, with the class starting March 1st. We are, indeed, glad to have him with us again, as the Lieutenant is very popular with the members of the command.

This year, as in the past, the 19th received a commendation from the General Inspector. The Company Commander, Captain Charles P. Clark, just received a communication from the Inspector's report commending us for the excellent showing of our personnel and equipment.

The Company Baseball Team, Champions of the Post for 1928, was tendered a beach party at Grand View on the afternoon of the 9th. Swimming was indulged in till a late hour when luncheon was served and the "Team" returned home in the Company motor boat at "lights out" tired and happy.

Bolling Field, Anacostia, D.C., August 1st.

Major Howard C. Davidson turned over his duties as Commanding Officer to Captain Donald P. Muse on July 12th and left for Fox Lake, Ontario, Canada, to enjoy a month's vacation. We hope he is having more enjoyable weather than we are.

Lieut. Louis M. Merrick, having arrived here from France Field, Panama Canal Zone, assumed the duties of the Operations Officer, relieving Lieut. Bob E. Nowland, who leaves for San Diego, Calif., en route to the Philippines.

Rockwell Field, Coronado, Calif., July 23rd.

Some changes have been made in commands at Rockwell Field since the last News Letter. Major A.L. Sneed is in command of Rockwell Field and Rockwell Air Depot; Captain H.M. Elmendorf is commanding officer of the 7th Bombardment Group and the 95th Pursuit Squadron; Captain E.C. Black is in command of the 11th Bombardment Squadron, and Captain R.H. Pritchard is in command of Headquarters 7th Bombardment Group as well as the Operations Officer of the field.

The Reserve officers are greatly enjoying their active duty during the annual summer training period and are great boosters for Rockwell Field. Lieut. W.K. Burgess, the popular camp commander, is very active and has the officers under his command extremely busy at all times. The social side is not overlooked and many impromptu affairs are held at the Coronado Hotel.

Major Shepler W. FitzGerald, who was a recent visitor at Rockwell Field, was taken to El Paso by Lieut. O.P. Gothlin, Jr., who was ferrying one of the Douglas O2-H airplanes to Fort Riley, Kansas.

Major H.A. Strauss, of Kelly Field, together with Captain A.C. McDaniel of Duncan Field, were recent visitors at Rockwell Field, arriving on July 16th in a Curtiss O-1 and departing the following day.

Major H.B. Clagett, Air Officer of the 9th Corps Area, paid an official visit to the field on July 11th.

Captain E.C. Black left Rockwell Field via rail on July 17th for San Antonio Air Depot, where he took delivery on an O-2 airplane, ferrying same to Rockwell Field on the 22nd and making the trip in a flying time of 11 hours and 45 minutes.

Lieut. W.L. Cornelius left Rockwell Field July 23rd by rail for the San Antonio Air Depot for the purpose of ferrying back a PW-9 plane.

Lieut. C.P. Kane, who recently returned from duty as a language officer in Japan, was detailed as the Depot Supply, Procurement and Property Officer of the Rockwell Air Depot, taking over the duties of Captain C.E. Giffin. Lieut. Kane and family are making their home in La Mesa.

The officers and wives of the Rockwell Air Depot gave a dance on July 14th in honor of the incoming officers and wives of the 7th Bombardment Group, 95th Pursuit Squadron and 11th Bombardment Squadron. The dance was well attended and every one reported an excellent time. The affair was to have been given a week later, but the date was advanced a week to permit Captain and Mrs. C.E. Giffin to attend before their departure for the Hawaiian Department on July 16.

Due to the efforts of Lieut. W.K. Burgess, Doctor Ford A. Carpenter, Staff Corps Specialist Reserve, noted meteorologist and Manager of the Meteorological and Aeronautical Department of the Los Angeles Chamber of Commerce, was induced during the past week to deliver a lecture to all officers of this post.

Brooks Field, San Antonio, Texas, July 26th.

With the publishing of the new pamphlet on Aerial Navigation and the receipt of additional equipment, the course conducted on this subject has become of such interest to the permanent officer personnel that it is predicted a number of the older officers will request Lieut. Holland to conduct lectures on this subject, particularly on the earth inductor compass.

The duplicate bridge tournament held in July at the San Antonio Country Club was won by Lieuts. R. Ott and S. Connell of Brooks Field.

Lieut. H.H. Holland was presented with a six pound girl on July 11th. Lieut. Holland has established what is believed to be a record for his daughter. When only 18 hours old the Lincoln National Life Insurance Company issued an educational policy in her favor.

Lieut. Warren Carter received a Distinguished Aerial Gunnery Medal for winning first place in the Aerial Gunnery Matches held at Langley Field in October, 1925. The presentation was made by Major S.W. FitzGerald at the officers meeting on July 25th.

Marshall Field, Fort Riley, Kansas, July 27th.

For the past two weeks our schedule has been quite filled with the Reserve Officers' Training Camp and the ferrying of ships and supplies to the Mail Detail at Superior, Wisconsin. The entire training period was completed without trouble or accident of any nature, and we are busy with the training ships getting them ready for the next Reserve Camp starting August 3rd. The last camp

comprised 32 officers, all except two being Air Corps men. The exceptions were Lieut.-Colonel J.W.Leedom, Field Artillery, and 2nd Lieut. R.L. Welpton of the Infantry. The reason for these officers took training with the Air Corps was to enable them to become better acquainted with other branches of the service and hence make them more efficient in their own branches.

One cross-country flight was made to Wichita, Kansas, on July 19th, the airmen returning the following day. Wichita, the Aviation Capital, treated the flyers with the greatest courtesy and tendered them a banquet at the Wichita Country Club. Every one who made the trip reported an enjoyable time.

The following is the list of Reserve officers who attended the camp from July 9th to 22nd:

Lieut.-Col. J.W. Leedom	1st Lt. B.P. Meyen
Capt. R.B. Mosher	1st Lt. H.D. Wentworth
Capt. Henry Schlacter	2nd Lt. F.J. Bassing
Capt. L.V.S. Addington	2nd Lt. K.W. Fischer
Capt. Paul Jones, Jr.	2nd Lt. J.R. Leverett
Capt. W.R. Johnson	2nd Lt. H.S. Smedley
Capt. J.O. Lewis	2nd Lt. J.A. Sturtevant
Capt. M.L. Lawton	2nd Lt. R.L. Lane
1st Lt. R.V. Campbell	2nd Lt. C.E. Cheney
1st Lt. D.B. Ellis	2nd Lt. J.L. Manley
1st Lt. G.J. Thomas	2nd Lt. R.G. Martin
1st Lt. W.B. Warde	2nd Lt. E.C. Pierce
1st Lt. V.E. Williams	2nd Lt. R.R. Randall
1st Lt. O.E. Davies	2nd Lt. T.A. Stratton
1st Lt. E.G. Dixon	2nd Lt. W.R. Weaver
1st Lt. C.B. Geise	2nd Lt. R.L. Welpton
1st Lieut. A.E. Johnson	

Lieut. Homer C. Munson, Air Corps, went to Santa Monica, Calif., to ferry a new 02-H to this station, while Lieut. Robert E.L. Pritle, Air Reserve, took an O-2 to Fairfield to be overhauled.

With seven Reserve officers now on active duty at this station we hope to be able to acquire a few more service type ships in the near future.

Capt. Levy Johnson, our Flight Surgeon, and Lieut. James L. Daniel,Jr. have gone to Superior, Wis., in an O-2-C for the purpose of giving physical examinations to the officers on the mail detail. Lieut. Herbert E. Rice has also gone to Superior to ferry supplies to the detachment.

Lieut. Wilbur Erickson, Air Reserve, is back with us after some unusually hard luck on the trip to Superior. He narrowly escaped injury in two crashes, and had only a bruised nose to show for his experiences.

Wright Field, Dayton, Ohio, August 6, 1928.

The Hon. F. Trubee Davison, Assistant Secretary of War for Aviation, spent several days at the Materiel Division during the week of July 9th for the purpose of conference with General Gillmore. While here he addressed the personnel in the auditorium.

"The past year", said Mr. Davison, "is the best aviation has ever had. This success is the result of years of hard work, devoted service, casualties in pioneering work, research, and much flying. One thing we are in danger of losing sight of is the vital importance of military aviation. Military aviation must be developed, for as in the past so in the future will the greatest military progress come through it to commercial and general aviation."

Lieut. Carl Greene left the Materiel Division recently to make a tour of Detroit, Buffalo, Boston and Washington. In Detroit he presented a paper before the A.S.M.E. on "Wing Flutter"; in Buffalo he attended a conference at the plant of the U.S. Aluminum Company on the "Joint Program on Thin-Gage Dural Sheets Made up of Corrugations of Curved Flat Elements"; in Washington he conferred with the Bureau of Standards on a possible means for cutting down or eliminating noises from propeller test rigs and torque stands. The trip was made with perfect flying weather, and all schedules were met without obstacle.

Lieut. Guy E. Lawrence, Air Reserve, just completed two weeks of active duty with the Materiel Division. Mr Lawrence is at present with the

Pioneer Instrument Company, New York City. It was good to see Mrs.Lawrence (nee Agnes Knightman) again. She was formerly also with the Materiel Division.

Lieuts. F.O. Carroll and R.C. Zettel each ferried an airplane to Bolling Field, July 18th, making the trip in 3 hours and 20 minutes.

General and Mrs. Gillmore will sail on August 22nd for an extended tour of Europe.

Acting Secretary of War Charles B. Robbins was a guest at Wright Field on July 26th. The flight was part of a tour of inspection of various Army Posts in the country.

A.C. Advanced Flying School, Kelly Field, Texas, Aug. 11th.

Major Tien Lai Huang, Chinese Army Air Corps officer who is making a four - month tour of the United States, visited the Air Corps Training Center and Kelly Field on Wednesday, August 1st. Major Huang has been making a study of flying schools in the United States, and carrying forward preparations for a trans-Pacific flight from the coast of California to China, via either Wheeler or Luke Field, in Hawaii.

During his tour of inspection Major Huang expressed the desire that the United States Air Corps send to China competent flying instructors to aid in organizing and perfecting plans of training and flying schools for the Nationalist Air Corps.

"The Nationalist Government is on a stable basis at this time", he said, "and is ready to place several flying schools in operation.

"There is little doubt that the United States is turning out the most efficiently trained flyers in the world today", Major Huang said. "I have visited practically every European country within the past few months and have observed their training methods. From my observation of training methods in your schools here I see that it is only the fittest of the fit that survive the rigorous requirements.

"With the standards of requirements for candidates so high and the intensive twelve months of training the students are compelled to undergo, the product of your flying schools here could be nothing but the most efficient. I am hoping that we may be able to install some such methods without loss of time when our schools are brought into operation."

Major Huang has procured a tri-motored Prudden plane for his contemplated flight, and will be accompanied, if present plans are carried out, by Harold J. Lynch, who was at one time Colonel Lindbergh's instructor.

Major Huang received his university training in the United States. He completed the regular four year course at Syracuse University, later obtaining his degree of PHD from Columbia. He has also studied languages at Harvard, and is an accomplished linguist, speaking English, Japanese, German, Russian and French quite fluently.

Congressman Melvin Maas, representative from Minnesota, arrived at the Air Corps Training Center August 6th for a short tour of inspection of Brooks and Kelly Fields. Congressman Maas is greatly interested in the Air Corps, especially in the various methods used in student training. While here he was taken for flights in several different types of training planes.

On August 8th the Congressman, flown by 1st Lieut. John V. Hart, proceeded to March Field, Riverside, Cal., for further study of the Training Center.

An Athletic council composed of the executive officer, all squadron commanders, the Post Exchange officer and the E & R officer was recently formed for the purpose of sponsoring and promoting athletics of all kinds among the men of Kelly Field. Under the present plan the organizations will compete against each other for points, each man entering an athletic event earning for his organization a certain number of points, or credits. At the end of the season the organization making the highest total number of points from all events is to receive a shield trophy for the all-around 1928-1929 championship in athletics for Kelly Field. 1st Lieut. Stanton T. Smith, the E. & R. officer, has announced the following schedule for the comming year.

(1) Football from August 10 to the end of the season. Each man qualifies by playing in at least one game. 50 points per man.

(2) Swimming meet during first week of September. Speed-distance-diving.

First place	150 points
Second place.	100 "
Third place	50 "

(3) Track and Field Meet about March 15th:
First place (plus points earned) . . 300 points
Second place " " " . . 200 "
Third place " " " . . 100 "
(4) Baseball from March 15th to the end of the season:
First place. . . . . 500 points.
Second place . . . . . 300 "
Third place. . . . . 100 "
(5) Boxing once each month, 10 points to each man fighting.
(6) Wrestling once each month, 10 points to each man matched.

The first boxing match to be held since the Council was organized took place on the evening of August 6th, and consisted of four fast preliminaries, two special events and a special exhibition. The main go, scheduled to be between K.O. Riley, West Side Athletic Club of San Antonio and Kid Broussard of the 40th Squadron, was not fought, due to the failure of Riley to appear. In the special exhibition, Bill Manness of San Antonio won a dedision over Gene O'Neill of the 10th School Group in a fight that was characterized by sporadic flashes of speed. Manness weighed in at 158; O'Neill at 150.

In the special event between Andy Kralosky of the 48th Squadron and Babe Dare of San Antonio, the referee declared the match to be a draw. Weights of the fighters were : Kralosky. 140; Dare, 138.

Corporal Baldwin of the 48th Squadron fought Red Foster of Fort Sam Houston through four rounds that were inclined to be slow and uninteresting. Occasional flashes of color were apparent, however, and twice it seemed that the fighters would stop clinching and fight a little. When the bell stopped the scrap neither man was badly damaged, and the referee announced the fight a draw.

Of the preliminaries, Battling McQuade of the 43rd Squadron and Don Carroll of the 48th put on the outstanding event. These men weighed in at the ringside at 126 pounds. From the first bell until Carroll was knocked out, the fight was full of the fastest action that has been seen in such an event at Kelly Field. Both fighters went out of their corners at the start with instructions from their trainers to rush in and finish the fight in the first round. After one minute and five seconds of mad fighting, and before the spectators could realize exactly what was taking place, McQuade put a hard left hook to Carroll's temple and Carroll fell into the ropes and slid to the floor. He got up immediately, but kept his head down until the referee had counted nine, then rushed back into the fight with as much speed as he had started it. McQuade got in another left jab to Carroll's jaw, and, dazed, Carroll started to shuffle away. Before he could get clear McQuade snapped out a stinging right that connected with Carroll's jaw, and Carroll went down for the count.

Carroll, immediately after the fight, challenged McQuade to a return bout, which will probably be fought on September 6th.

Travelling as a representative of the German Government, Major von dem Hagen German Army, visited Kelly Field and the Air Corps Training Center on August 11th. Since arriving in the United States the Major has visited Wright Field, Selfridge Field, Chanute Field and Scott Field. His present itinerary will take him to Fort Crockett on August 15th, and to Fort D.A. Russell about August 18th.